

**REMARKS****Status of the Claims**

Claims 1, 9, 16, 22, 25-28 have been amended. Claim 15 has been canceled. New claims 29-31 have been added.

**Allowable Subject Matter in New Claims**

Applicant respectfully thanks the Examiner for allowing claims 12, 13, and 15 if rewritten in independent form including all of the limitations of their base claims and any intervening claims. Claims 12, 13, and 15 have been rewritten in independent form as suggested by the Examiner. Specifically, new independent claim 29 includes all of the limitations of allowable claim 12. New independent claim 30 includes all of the limitations of allowable claim 13. Independent claim 9 has been amended to include all of the limitations of allowable claim 15. Claims 10-14 depend on independent claim 9. Furthermore, new independent claim 31 has been written in method form to include all of the limitations of allowable claim 15. As such, Applicant respectfully submits that claims 9, 10-14, 29, 30, and 31 are allowable.

**Office Action Rejections Summary**

Claims 1-8, and 16-21 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 has been rejected under 35 U.S.C. § 102(b) as being anticipated by Evans et al. Claims 10, 11, and 14 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Evans et al. as applied to claim 9 and further in view of Mukherjee.

Claim 22, and 25-28 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Evans et al. in view of Mukherjee. Claims 23 and 24 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Evans et al. in combination with Mukherjee as applied to claim 22, and further in view of Bardutz et al.

### **Claim Rejections under 35 U.S.C. § 112**

Claims 1-8 and 16-21 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicant respectfully submits that independent claim 1 and independent claim 16 have been amended to clarify inherent limitations and to include limitations from allowable subject matter. Specifically, amended claim 1 now reads an “equalizer...for amplifying the downstream frequency band components...and attenuating other components outside the downstream frequency band” (Claim 1). Support for this inherent clarification is found at least in the specification on page 24-25. (Specification, pg. 24-25, [0057]). In addition, claim 1 includes limitations from allowable claim 13.<sup>1</sup> As such, Applicant respectfully submits that claim 1 is allowable. Applicant respectfully submits that claims 2-8 are allowable at least because they depend on an allowable independent claim.

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<sup>1</sup> Amended claim 1 reads “a second hybrid coupling the differential amplifier pair to the local loop, the second hybrid differentially amplifying the downstream frequency band components of downstream DSL signals received from the differential amplifier pair and passing the differentially amplified downstream DSL signals to the local loop, and the second hybrid receiving upstream DSL signals transmitted over the local loop.”

Similarly, amended claim 16 now reads “further amplifying the downstream frequency band components of downstream DSL signals” (Claim 16). Support for this clarification is found at least in the specification on page 24-25 (Specification, pg. 24-25, [0057]). In addition, amended claim 16 includes limitations from allowable claim 12.<sup>2</sup> As such, Applicant respectfully submits that claim 1 is allowable. Applicant respectfully submits that claims 17-21 are allowable at least because they depend on an allowable independent claim.

As such Applicant respectfully submits that that the § 112, second paragraph has been overcome and claims 1-8 and 16-21 be allowed.

#### **Claim Rejections under 35 U.S.C. § 102(b)**

Claim 9 has been rejected under 35 U.S.C. § 102(b) as being unpatentable over Evans et al. Applicant respectfully submits that claim 9 has been amended to overcome the Examiner’s rejection through amendment with allowable claim 15. As such, Applicant respectfully submits that amended claim 9 is in condition for allowance. Applicant respectfully submits that claims 10-14 are allowable at least because they dependent on an allowable independent claim.

#### **Claim Rejections under 35 U.S.C. § 103(a)**

##### **Claims 10, 11, and 14**

Claims 10, 11, and 14 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Evans et al. as applied to claim 9, and further in view of Mukherjee. Applicant respectfully reserves the right to swear behind the Evans, Mukherjee, and Bardutz references at a later time.

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<sup>2</sup> Amended claim 16 reads “wherein the first hybrid differentially amplifies the upstream frequency band components received from the inverting amplifier, and passes the differentially amplified upstream DSL signals to the local loop.”

Applicant respectfully submits that claims 10, 11, 14 are allowable at least because they dependent on an allowable independent claim 9.

Claims 22, and 25-28

Claim 22, and 25-28 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Evans et al. in view of Mukherjee.

First, Applicant respectfully submits that claim 22 has been amended to include limitations from allowable claim 15. Specifically, claim 22 now includes “improving transmission of POTS band signals over the local loop using a set of POTS loading coils within the first loop extender that are adapted to be coupled to the local loop” (Claim 22). As such, Applicant respectfully submits that claim 22 is allowable. Furthermore, Applicant respectfully submits that claims 23-24 are allowable at least because they depend on an allowable independent claim.

Second, Applicant respectfully submits that claim 25 has been amended to include limitations from allowable claim 12. Specifically, claim 25 now includes “inverting the amplified upstream DSL signal using an inverting amplifier; and differentially amplifying the amplified upstream DSL signal and the inverted amplified upstream DSL signal using a first hybrid” (Claim 25). As such, Applicant respectfully submits that claim 25 is allowable.

Third, Applicant respectfully submits that claim 26 has been amended to include limitations from allowable claim 12. Specifically, claim 26 now includes “means for inverting the amplified upstream DSL signal using an inverting amplifier; and differentially amplifying the amplified upstream DSL signal and the inverted amplified upstream DSL signal using a first hybrid” (Claim 26). As such, Applicant respectfully submits that claim 26 is allowable.

Fourth, Applicant respectfully submits that claim 27 has been amended to include limitations from allowable claim 13. Specifically, claim 27 now includes “wherein a hybrid differentially amplifies the differentially amplified downstream DSL signal, and passes the further differentially amplified downstream DSL signal to the local loop” (Claim 27). As such, Applicant respectfully submits that claim 27 is allowable.

Fifth, Applicant respectfully submits that claim 28 has been amended to include limitations from allowable claim 13. Specifically, claim 28 now includes “wherein a hybrid differentially amplifies the differentially amplified downstream DSL signal, and passes the further differentially amplified downstream DSL signal to the local loop” (Claim 28). As such, Applicant respectfully submits that claim 28 is allowable.

#### Claims 23 and 24

Claims 23 and 24 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Evans et al. in combination with Mukherjee as applied to claim 22, and further in view of Bardutz et al. Applicant respectfully submits that claims 23 and 24 are allowable at least because they depend on allowable independent claim 22 as described above.

**CONCLUSION**

It is respectfully submitted that in view of the amendments and remarks set forth herein, the rejections have been overcome. Applicant reserve all rights with respect to the application of the doctrine equivalents. If there are any additional charges, please charge them to our Deposit Account No. 02-2666. Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: \_\_\_\_\_

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